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ABSTRACT

Landscape architects, playground manufacturers, and the federal government have all developed guidelines for accessible, safe play landscapes. This paper examines the difficulties in meeting these guidelines due to two main obstacles: ignorance of access needs and the perception that accessibility is expensive. It suggests that landscape architects have the skills to design access at a reasonable cost because they can evaluate sites for their potential advantages and drawbacks. The paper argues for playground layouts that allow handicapped and able-bodied children to play together. Concluding comments briefly address the needs for other playground components that include water, shade, and areas for supervising adults. Line drawings of two playground design concepts are included. (Contains 16 references and 7 notes.) (GR)

ACCESSIBLE & SAFE PLAYGROUNDS INTO EVERY TOWN, U.S.A.

E. Malle Kienitz and Robert L. Kent, Jr.

Landscape architects, playground manufacturers, and the federal government have all researched and developed guidelines for accessible, safe play landscapes. The results are available in guidelines, standards manuals and in technical sections of the A.D.A. (Americans with Disabilities Act of 1990) itself.[1] The problem is to create playgrounds that meet these guidelines in the all the towns, cities, and communities where children actually play. The State of Rhode Island did a safety and accessibility survey of all public playgrounds. None met the standards for safety and accessibility [Rhode Island, 1993]. This condition exists in other areas of the country as well.[2]

Over 25%[3] of the population has some form of disability, temporary or otherwise, using different skills or abilities for a task than commonly used. Some achieve motion without using their legs, others learn to pay attention without being able to hear, etc. The basic tenet in playground safety guidelines is allowing children to make their own choices for play without being injured by unperceived hazards [Tinsworth, 1992; Wallach, 1990, 1992]. Playground safety has come a long way through design changes made to playground equipment and materials. Creating accessible play must still overcome the first hurdle in that statement: providing all children the opportunity to make their **own** choices when they play on the new, safer equipment. Our profession can offer significant value to society by providing learning experiences for all children.

The two obstacles most commonly encountered in the effort to design accessible and safe playgrounds are ignorance of access needs and the perception that accessibility is expensive, a hardship for communities with tight budgets. Some communities have been forced to act on access, regardless of their attitude, because complaints from their town have been filed with the Department of Justice, which will follow up on correction of the problem.

It takes an understanding of disabilities, manufacturers, public sector concerns, and work in a range of budgets and spaces to create access where needed. A designer working on accessible play landscapes often needs to spend time with playground committees, recreation personnel and other decision makers to help them understand that buying a play structure with a transfer platform[4] cannot be a complete solution to an accessible playground.

Some clients will not even consider a transfer platform. Others need to understand that pathways to the equipment and the safe fall surface around the piece must be accessible. Often structures predesigned by equipment manufacturers have only one accessible section which can be reached using a transfer platform, in essence a "disabilities only" zone limited to those who can transfer. Other portions of the structure will be inaccessible because the connecting pieces are overhead ladders, a difficult piece for some able-bodied children, or another inaccessible connection (fig. 1).

In other cases, the other consultants on a project will not have considered access to play except by designating a blank square area for a play structure. Accessible site circulation to play is needed, and redesign will be necessary if the landscape architect has not been involved from the beginning of the project. Design firms are not always up to date on all the needs for play design and will need to be informed about the state-of-the-art techniques.

As an example of a similar situation, manufacturers have spent more than a decade redesigning equipment and surfacing to meet the first and second

set of C.P.S.C. [U.S. Consumer Product Safety Commission 1981, 1992] guidelines for playground safety. Every illustrated playground in play catalogs warns clients to install a safe-fall material around their equipment. Playground articles in magazines always mention safe-fall material. Newer catalogs give proper safe-fall dimensions for each piece. Yet many public playgrounds exist today without safe-fall material,[5] and the public sector has a lot of individuals who are confused about appropriate safe-fall. One Department of Public Works head in a California community stated that sawdust was what he intended to use for safety. It is not on the list of approved materials, nor is it accessible!

The work to make play accessible will take the same kind of persistent, long-term effort, trying to reach everyone, anywhere who is involved in decisions about playgrounds in their communities. Our profession is in an excellent position to affect decisions about play landscapes since we are directly involved in the design of many of these.

As landscape architects we have the skills to design access at a reasonable cost because we can evaluate sites for their potential advantages and drawbacks. Controlling or taking advantage of landform is often one cost effective way to gain access. It has the advantage of appearing as an intrinsic part of the site rather than an obvious "handicap" feature. The best expression of access is achieved when everyone enters the site or the site features along the same approach. Separate but equal is not the intent of the A.D.A.

Taking advantage of landform has worked to our advantage on many sites. People often don't realize that a playground surface does not need to be flat. Manufacturers sometimes have difficulty with grading concepts that raise or lower the ground around equipment even at small percentages. Fortunately, the posts still work.

At one playground designed in Rhode Island for the Easter Seals school, 80% of the children were in wheelchairs, many unable to use transfer platforms. With only two ramp pieces, directly from the catalog, one at each end of the structure; we used the existing grade to create access to the upper level deck, allowing students and their able-bodied visitors to play together.

Other equipment on that structure was all standard manufacturer's play pieces. Some of the play experiences which develop hand-arm coordination: steering wheels, phones, tic-tac-toe games, etc. were used as enclosures on the upper level. The access ramp became everyone's main entry to the upper level, and the whole play structure was built at a similar cost as an inaccessible one would have been, with just as many play opportunities for the money.

It is important to have access to upper levels for all children regardless of the notion expressed to us by a recreation director, who said, "They can't do anything up there." Some children, not able to transfer, can slide with a helper alongside on a standard play piece, the double slide: two going down together. Various standard pieces have potential for kids independently or with help, given circulation access. A further reason for upper level access is the adults supervising children. The disabled parent needs access to his/her child too.

Two other important types of learning occur on the upper level besides physical development. They are: (1) social play, the ability to join other children playing above, and (2) the development of kinesthesia, the sense of oneself in relation to one's environment. People in wheelchairs particularly enjoy the sense of looking down onto something from above, after spending so much time looking up.

The safety designed into standard play equipment and safe-fall material provides protection for every user. Safe-fall material provides the same degree of cushioning for everyone. Guard rails designed to prevent bicycles from riding off upper platforms also protect wheelchair users from passing through. Turning access approach at a right angle to the ramp discourages bicycles from riding inside.[6]

All of the above can happen on a public playground, within the project budget, using standard equipment, if the designer reviews the layout of the play structure, whether created by the design office or the manufacturer, and the site (fig.2). Check for complete access to all pieces so children can chose for themselves what they will do. Review play pieces for use by different abilities on both upper and lower levels. Ensure properly designed access from convenient handicapped parking spaces to the play structure and around its lower levels.

Other important components for play landscapes for everyone include water, sand, and grass made accessible. While found in professional articles and books for accessible play [Arroyo, 1990; Goltsman and Driskell, 1992], the general public is not aware of these needs, and we must actively encourage these features. Drinking water and shade in proximity to play are not only needed for rest and refreshment, but also by some children with disabilities who have trouble with photosensitivity or body temperature [King, 1996]. Accessible benches are needed both for social play and supervising adults.

Using contrasting and bright colors in comprehensible patterns which enhance the play, making it more exciting, will help orient people with low vision[7] or developmental disabilities.

All of these measures to make play landscapes accessible are within our area of expertise and capability. We can truly make a difference in the lives of many children if we persist in educating, in communicating our knowledge. Let all our kids play, and let all adults help their children when they need to.

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Notes

1. The list of references contains all the documents referred to by this author. Various states have also created their own laws and standards. Please refer to those for more information when designing in a particular state.

2. This is based on observations by our firm over the past 10 years as we have designed over three hundred playgrounds for towns of all sizes.

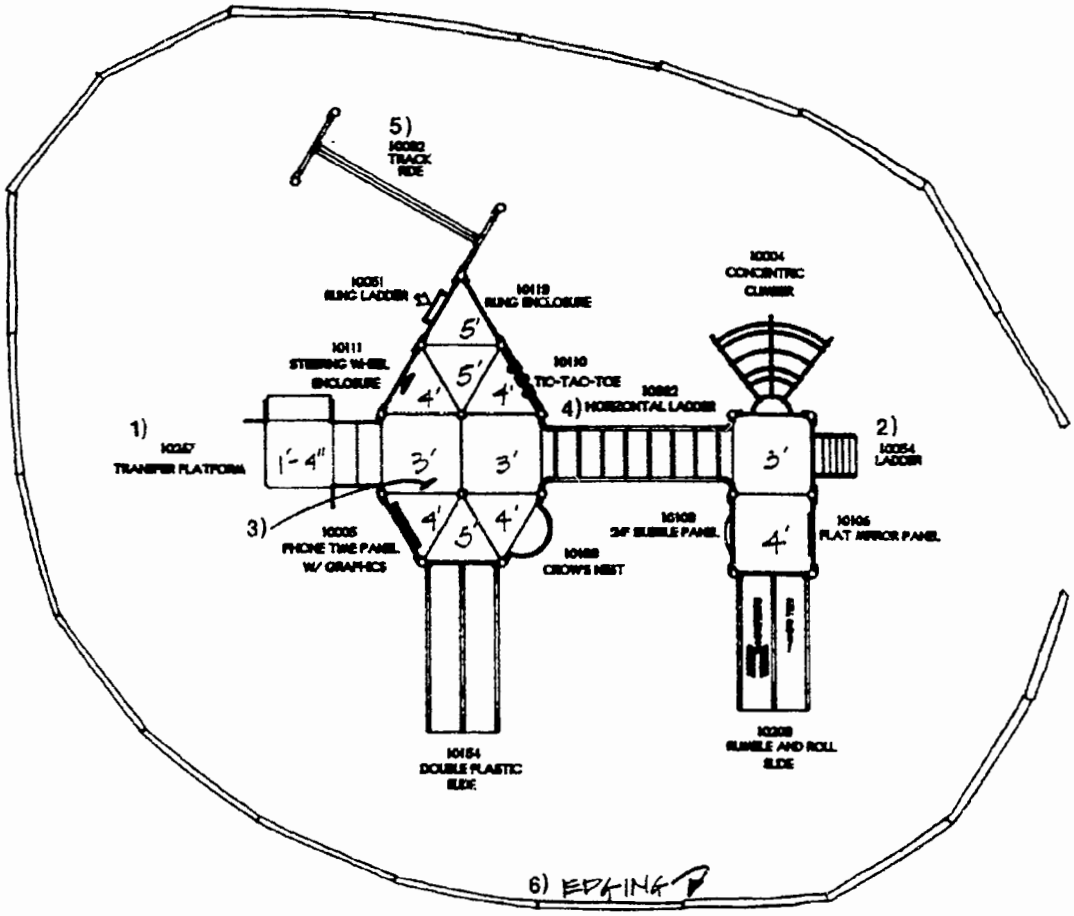
3. Page 2 of the Americans with Disabilities Act of 1990 states that 43 million Americans have some form of disability. This is approximately 25% of our population.

4. A transfer platform is a deck or other elevated surface with the proper height (varies by age: 12 to 17 in., [Architectural and Transportation Barriers Compliance Board, 1992]) and accessible location to allow a child to approach and transfer from the wheelchair to the other surface.

5. Based on same range of observations as cited in note no. 2. We have designed playgrounds for most areas of the country, and have seen other playgrounds all around them which are dangerous.

6. Non-standard use of equipment cannot be entirely prevented by design since one of the reasons children play is to test the relationship of things in their environment and their own effect on them [Newcombe, 1982]. Logical thinking as practiced by adults, does not emerge until approximately the age of 12 as discussed by child development scientist Jean Piaget [Droz and Rahmy, 1972]. Encouraging supervision, posting rules, using standard warranted equipment, and meeting safety guidelines are necessary steps when play is open to public use [Wallach, 1992].

7. Yellow is the last color to be lost as vision deteriorates or is poor [Clarke, 1995].



Notes

1. No wheelchair access & transfer station only serves one deck area

2. Access by steps difficult for crutches

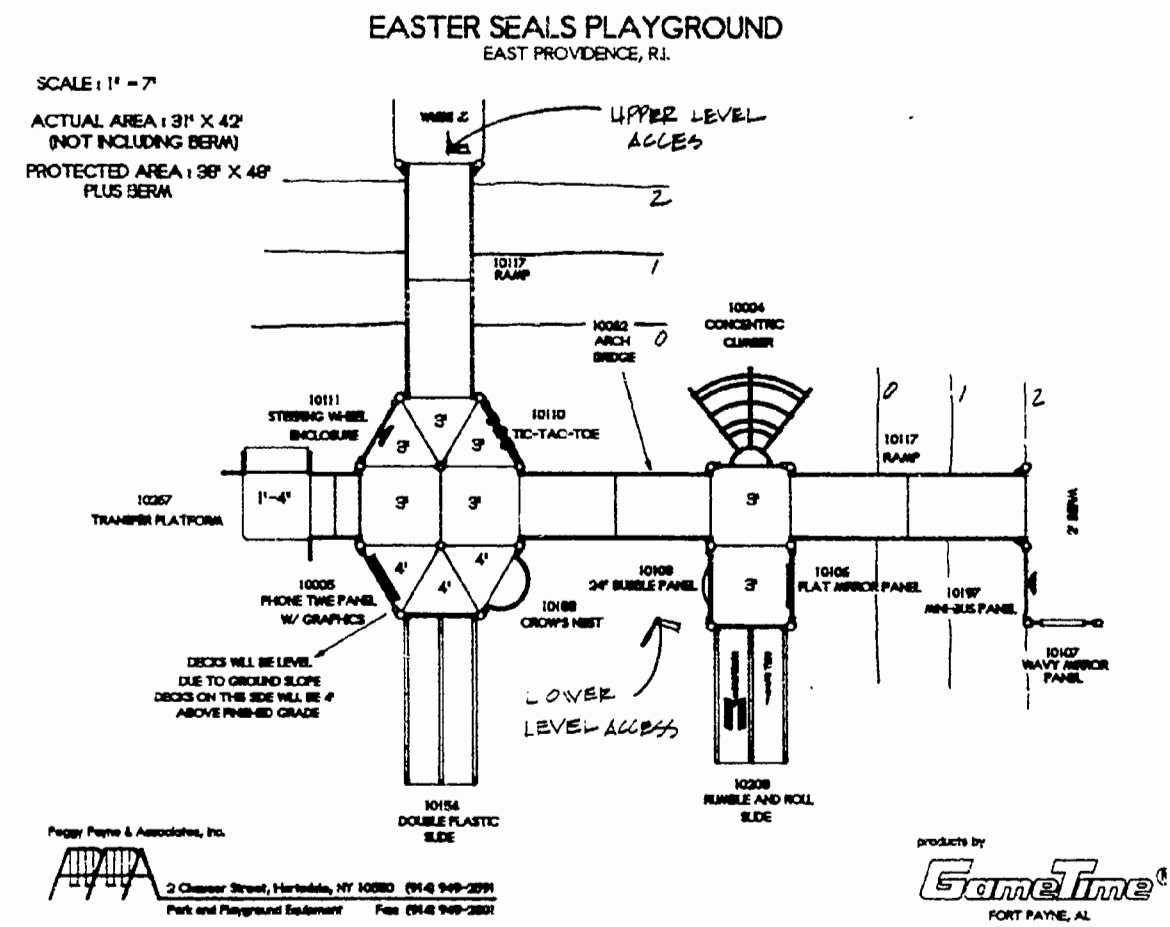
3. Multi-level decks: difficult with crutches, impossible for wheelchairs

4. Overhead ladder-type pieces are barriers when used as linkages between decks

5. Some attachments/pieces are difficult to use.

6. Edging is a barrier

Figure 1. Common problems for access in standard playground structures



Notes

1. 100% of lower and upper level accessible

2. Ramp access to upper level play enclosures.

3. Deck large enough for wheelchair to turn around

4. Linkage between decks (bridge) is accessible

5. Double/multiple slides allow racing, helpers, and an alternate type of access for some children.

6. Some standard climbers are easier for everyone to use.

Figure 2. Standard equipment used to achieve access.